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man had three Boys, and one Girl, after the *Fallo-  
pian* Tube on the right Side had lost its Action.  
I am,

*Gentlemen,*

*With great Respect,*

*Decem. 17.*

1747.

*Your most obedient and*

*Most humble Servant,*

Starkey Myddleton.

XI. *A Physiological Account of the Case of  
Margaret Cutting, who speaks distinctly,  
tho' she has lost the Apex and Body of her  
Tongue: Addressed to the Royal Society,  
by James Parsons M. D. F. R. S.*

*Gentlemen,*

*Read Dec. 17.*  
1747.

**A**S several of the Members of this  
worthy *Society* were somewhat di-  
vided in their Opinions concerning what was re-  
ported of *Margaret Cutting*, when they were first in-  
form'd of her by Mr. *Baker*\*; it will be necessary  
(in order to render her Case the better understood)  
to lay before you the following short Particulars,  
which

\* See these Transf. N<sup>o</sup>. 464, Artic. II. p. 143, et seq.

which are the Result of an Examination made a few Days since by Dr. *Milward* and myself; and which, in general, differs not from the Opinion which that learned Gentleman and I mention'd to this *Society*, upon the Occasion, which the Science of Anatomy necessarily suggested to us at that time. But *James Theobald* Esq; a worthy Member of the *Royal Society*, having encouraged her to come to *London*, and having brought her to this Meeting of the *Society*, has now given us all an Opportunity of coming at the Truth of her Case; wherefore I shall now, Gentlemen, present you with, *first*, an Account of her present Condition; and then, some Considerations on the natural State and Uses of the Tongue; which will shew you how far she makes the *Lips* and *Teeth* supply the Want of *her* Tongue in speaking; and also be a Direction to every Gentleman present to judge of the Case before him.

*Of her present Condition.*

THE *Apex* and *Body* of the Tongue (being the only Parts that naturally fill the Cavity of the Mouth) are intirely wanting in this Woman, as closely to the Region of the *Os Hyoides*, which is the Root of the Tongue, as can well be conceived; and which is now situated too low in the Throat to be perceived, even when she opens her Mouth at the widest.

But let any one lay the Tops of the Finger and Thumb to the Sides of her Throat, and let her at the same time pronounce the Letter *k* he will feel the remaining Root of the Tongue rise towards  
the

the Roof of her Mouth, in order to perform; it; however, she cannot keep it there any longer than the Moment of thrusting it up, for want of the Ligament (which was destroy'd with the Tongue) that is destin'd, together with the following Muscles, to keep the whole Tongue forwards in its due Situation.

The *Genioglossi* are a Pair of Muscles which arise from the fore Part of the Inside of the lower Jaw, and are inserted into the Body of the Tongue by three different Directions; the anterior Part is carried forward towards the *Apex*: the posterior runs obliquely backwards towards the Root, sending a narrow Slip on each Side to the *Cornua* of the *Osses Hyoides*; and the middle Part ends about the middle of the Tongue.

Now there are certain *Inequalities* appearing on, and closely adhering to the Floor of the Cavity of the Mouth, one of which being the most considerable, and having a Resemblance in its Substance to that of the Surface of the Tongue, has been, if I am rightly inform'd, inadvertently mistaken for a Tongue, by a Gentleman professing Surgery in the Country; and which he thought, for want of a careful Examination, perform'd the Offices proper to the *Apex*; but a little Care and Circumspection would have inform'd him, that those Appearances are only Fragments of the *Genioglossi* mention'd before, and that upon the Separation of the sound Parts from those mortified, such Fragments, as had escaped, were retracted, and cicatrized down into their present State; nor is it difficult to conceive how the Root of the Tongue must of Necessity sink lower down into the Throat, by the Loss of these Muscles and the proper Ligament; which, as I have

observed before, naturally kept it higher than it could remain ever since their Destruction.

If the Mortification had reached the *Os Hyoides*, it must have reached, and destroy'd the Muscles of the *Larynx*, and then the Voice would have been destroy'd; and also those of the *Pharynx*, and then Deglutition could never have been perform'd; the dreadful Consequences of which need not be enumerated here; but she swallows well, and her Voice is perfect, and therefore it is not very extraordinary she should command her Voice by the proper Muscles which remain untouch'd.

The nasal Opening is quite expos'd, because the *Uvula* which cover'd it was also destroy'd; for one Pair of its Muscles (the *Glossio-Staphilini*) arise from the Tongue; by which no doubt the Distemper was communicated to this Part also.

She has her Taste perfectly, which is hereafter accounted for.

*Some Considerations on the natural State and Uses of the Tongue.*

THE Tongue is a fleshy Substance, chiefly made up of Muscles; and consists of a *Basis* or Root, a *Body*, and an *Apex*; the Basis is the thickest and most substantial Part, contains the *Os Hyoides*, and is naturally situated very low in the Throat: From which the Body rises upwards and forwards, and is terminated by the anterior Part or *Apex*; proceeding under the *Uvula* and Roof, and lying upon the Floor (if I may so call it) of the Mouth. As to the more particular Description of all its other Parts, I cannot apprehend it is at all necessary here, since it is not to our Purpose, and would take up too much of your Time.

As to its Uses, it is said to be the Instrument of *Speaking* and *Tasting*; as to the latter, Experience shews us that the very *Apex* of the Tongue is less capable of discerning Tastes than the next Part to it, and this than the Parts yet farther back, all along the *Body* to the Root; so that altho' the Taste of any thing is first perceived by the *Apex*, yet the Gust increases, the more the Morsel approaches to Deglutition, until it is quite protruded into the *Gula*; because as the Tongue grows more thick backwards it contains more of the nervous *Papillæ* than the smaller Part, and also because there is a Capacity of tasting in the Membranes of the back Part of the Roof to the Root; as if Nature intended to increase the Gust, that Deglutition may be the better and more eagerly performed for the Service of the Animal: Hence altho' the *Apex* and *Body* of the Tongue be gone, yet there is not a Depravation of Taste, which is the Case of the Person now under your Consideration.

As to *Speech*, which is only *Sound* or *Voice* articulated into Expression, the Tongue is not the *sole* Organ for such Articulation; the *Lips*, *Teeth*, and *Roof* of the Mouth are Instruments also for the same Purpose; the two latter for the necessary Resistance to the *Apex* of the Tongue, and the Lips for the absolute Articulation and Pronunciation of many Letters; however the following short Examination of the Letters of the Alphabet, as expressed by these Organs, will demonstrate it.

The Tongue expresses some Letters with its *Apex*, and some with its Root.

Those absolutely proper to the *Apex* are only five,  
*d, l, n, r, t.*

And those to which it only assists are the following Letters, as *c, g, s, x, z*; all which can be performed by the Teeth alone, and which this Person does very well.

Now the Lip-Letters, and those expressed by the Root of the Tongue, she also performs as well as any Person; the former are *b, f, m, p*; and the latter are *k, q, x*; and as to the Vowels, and the Aspiration *h*, since they are chiefly founded by the Exhalation of the Voice, commanded partly by the Lips in widening or straitening the Capacity of the Mouth, these she can also express; so that there is no Letter she cannot pronounce but the five *Apex* Letters; and those she manages so well by bringing the under Lip to her upper Teeth, in the Course of her Conversation, that any one can instantly apprehend every Word she says; and she further plainly proves the Lips are a better *Succedaneum* to the *Apex*, than that could be to the Lips if they were wanting.

Indeed it is natural enough for those who make the Tongue the absolute and sole Instrument of Speech, to imagine it as absurd to say a Woman spoke without a Tongue, as that she saw without an Eye; but when we consider the provisional assisting Organs ordain'd by the wise AUTHOR of PROVIDENCE, serving to this necessary and expressive Accomplishment, I hope it will not seem so extremely marvellous, that she speaks without the *Body* and *Apex* of her Tongue, as to create any further Doubt of the Matter. I am, *Gentlemen*,

December 17.

1747.

Your most humble Servant,

James Parsons.

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